ALBA 870AC

Four-valve, plus rectifier, three-waveband superhet. Sockets are provided for a pickup, and a high-resistance extra loudspeaker may be connected to terminals on the output transformer primary. Suitable for operation from standard AC mains. Marketed by A. J. Balcombe, Ltd., 52-58, Tabernacle Street, London, EC2.

ON SW signals are coupled by L11 to the grid tuning coil L12, tuned by VC2 section of the triple ganged condenser. On MW and LW bands, signals are coupled by L1 (MW) and L2 (LW) to the band-pass filter unit.

L3 and L4 are the primary windings tuned by VC1 section of the gang, and L9 and L10 are the secondary windings tuned by VC2. L5—L8 are the coupling coils.

Signals are fed to the grid of the frequency changer V1, which is cathode biased by R1, decoupled by C2, and is also connected to the automatic volume control line.

The oscillator section of V1 employs tuned grid circuits across VC3 section of the gang. L14, L16 and L18 are the LW, MW and SW grid coils respectively; while L13, L15 and L17 are the anode feedback coils fed from the HT line through R6.

The intermediate-frequency transformer L19, L20 transfers the IF signal from V1 to the grid of the amplifying pentode V2, which is AVC controlled. Cathode bias is derived from R8, decoupled by C7.

A second IF transformer L21, L22, passed on the signal to the signal diode of the double diode V3. R13 is the signal load resistance filtered by C11, and the low-frequency signal is fed via decoupling components R12, C10 and C13 to the volume control R14.

The AVC diode of V3 is fed from L22 via C12, the load resistances being R10 and R11. Full AVC is applied to V1; while the grid circuit of V2 is fed from the junction of R10 and R11.

For gramophone reproduction via the pickup sockets the pickup output is fed into the grid circuit of V2, which then acts as an LF amplifier. The LF signals developed across R9 are coupled by C14 to the volume control R14. From here the signal is fed both on radio and gramophone to the grid of the output V4.

V4 is cathode biased by R15, which also provides delay volts for the AVC circuit with decoupling effected by C16. A permanent degree of tone correction is effected by C15, and the output transformer L23, L24 couples V4 to the energised moving-coil loudspeaker, of which L25 is the speech coil, L26 the hum-bucking coil and L27 the field winding.

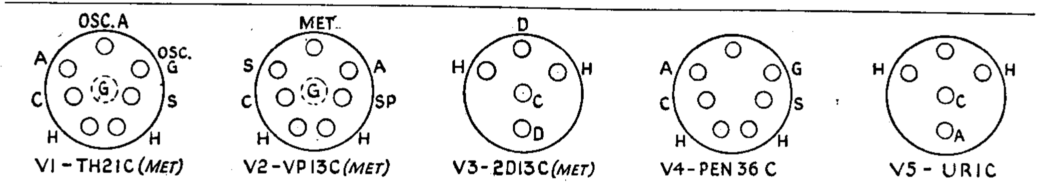
Continued overleaf

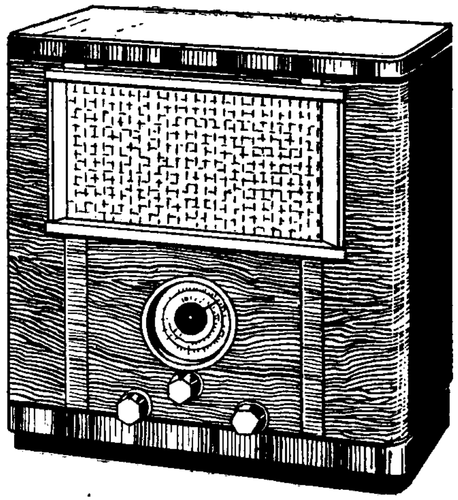
RESISTORS

R	*Ohms*	*R*	*Ohms*
1	200	9	5,000
2	10,000	10	500,000
3	25,000	11	500,000
4	25,000	12	50,000
5	1 meg	13	500,000
6	13,000	14	500,000
7	100	15	100
8	150		

CONDENSERS

C	*Mfds*	*C*	*Mfds*
1	.1	11	.00025
2	.1	12	.00025
3	.1	13	.005
4	.0001	14	.005
5	.002	15	.005
6	.1	16	25
7	.1	17	12
8	.002	18	8
9	.1	19	.00025
10	.00025		

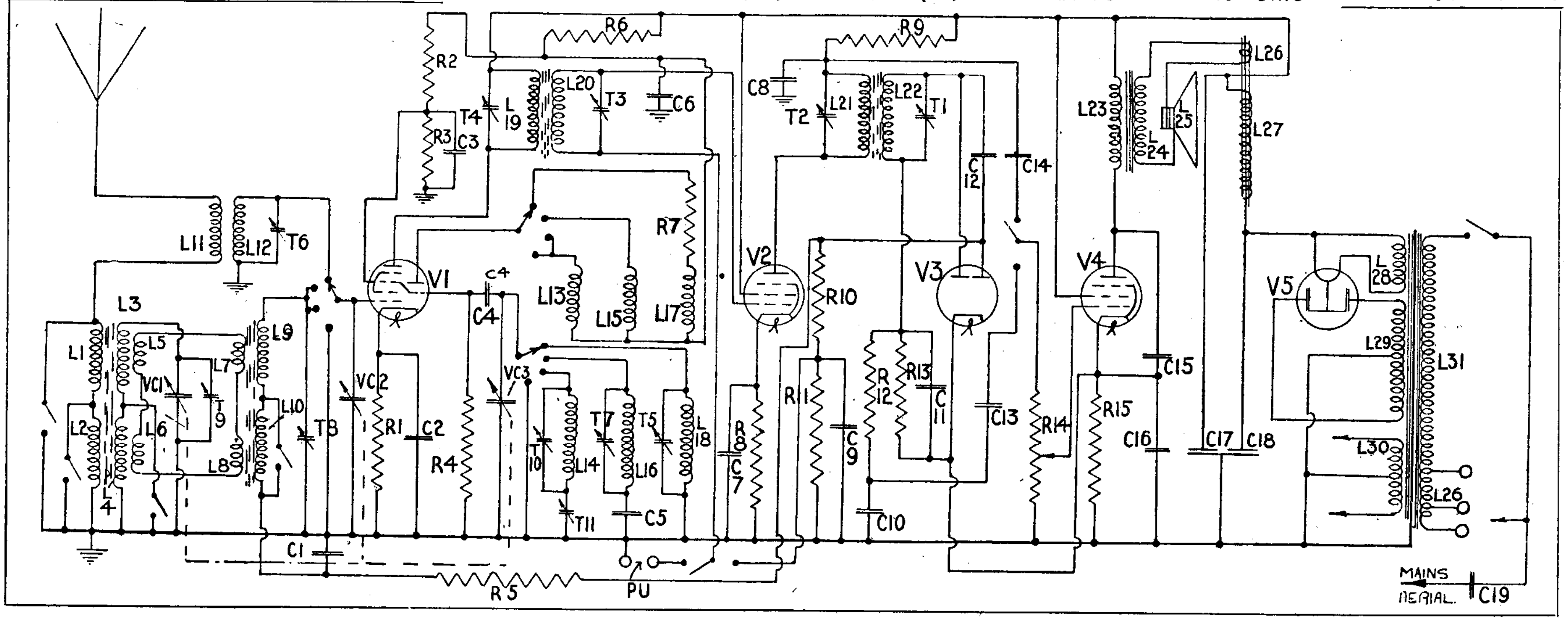




VALVE READINGS

V	*Type*	*Electrode*	*Volts*	*Ma*
1	TH4	Anode	250	2.3
	(Met)	Osc anode	110	4.6
		Screen	50	4
2	VP4B	Anode	184	13.5
	(Met)	Screen	250	4.6
3	2D4A (Met)	—	—	—
4	Pen4VB or	Anode	228	36
	Pen A4	Screen	250	3.9
5	IW3 or IW4/350	Cathode	290 (approx)	

Pilot lamps, 6.2 v, .3 amps.



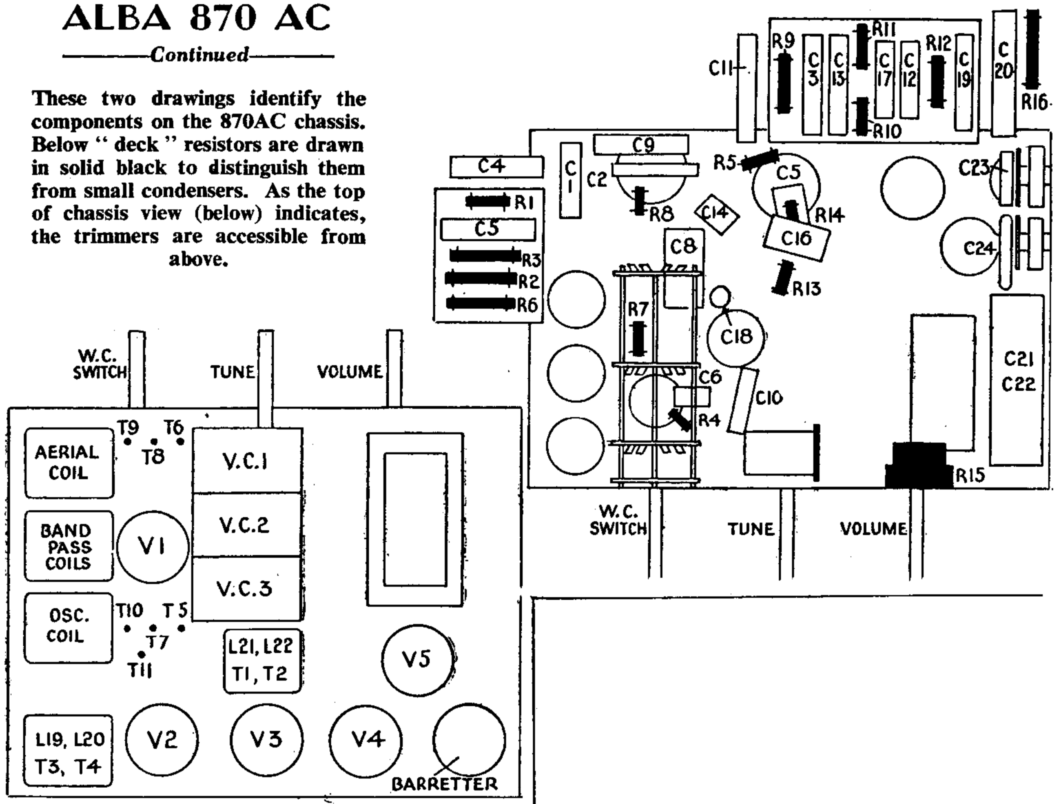
WINDINGS

L	*Ohms*
1	70
2	6.75
3	1.6
4	14
5 6 (total)	22
7 8 (total)	20
9	1.6
10	15
11	.1
12	Very low
13	2.5
14	10
15	50
16	1.6
17	3.5
18	Very low
19	50
20	50
21	50
22	50
23	500
24	Very low
25	1.5
26	Very low
27	2,000
28	.1
29	300+300
30	Very low
31 (total)	50

ALBA 870 AC

Continued

These two drawings identify the components on the 870AC chassis. Below " deck " resistors are drawn in solid black to distinguish them from small condensers. As the top of chassis view (below) indicates, the trimmers are accessible from above.



HT is derived from the full-wave rectifier V5 with smoothing effected by the field winding L27 and condensers C17 and C18. A mains aerial lead is provided for picking up HF signals from the mains wiring via C19.

GANGING

IF Circuits.—The manufacturers do not recommend adjustment of the IF circuits without the use of an oscillograph. If alignment has to be carried out a signal of 117.5 kc should be injected into the grid circuit of V1 and T1, T2, T3 and T4, adjusted for maximum output.

Band-passing can be effected by slightly staggering the adjustments to the trimmers if peaking results in instability or harsh reproduction.

SW Band.—Switch receiver to SW and tune it to 20 m.

Inject a signal of this wavelength into the aerial and earth sockets and adjust T5 and T6 for maximum output.

MW Band.—Switch receiver to MW and tune it to 200 m. Adjust T7 for maximum output on a signal of this wavelength.

Tune receiver to 500 m, and on a signal of this wavelength adjust T8 and T9 for maximum output.

LW Band.—Switch to LW and tune to 1,600 m. Inject a signal of this wavelength and adjust T10 for maximum output and, while rocking the gang, T11.

Reasonable quantities for sale to the public . .

available from your factor

NOW!

MULTICORE SOLDER
FOR RADIO, ELECTRICAL, MOTOR AND ALL HOUSEHOLD PURPOSES
CONTAINS 3 CORES OF FLUX
NO EXTRA FLUX REQUIRED
ENOUGH FOR 240 AVERAGE JOINTS
6D

Size 2. Multicore Solder Cartons. Each contains sufficient quantity of Ersin Multicore Three Core Solder Wire to make 240 average solder joints. Cartons are very attractively printed in three colours. **Net trade price 4/- doz.**

Like the makers of many other good things we have for months been trying to keep up with the demand for the 6d. Multicore Cartons. More supplies are now available to meet the demand which has been created by consistent advertising in " hobbies papers " such as " Practical Mechanics," " Practical Engineering," " English Mechanics," " Practical Wireless " and selected national newspapers having a combined circulation of 8,000,000 readers. Get your share of this profit making business by ordering a few dozen cartons NOW !

MULTICORE SOLDERS LIMITED

Commonwealth House, New Oxford Street,
London, W.C.1. Tel.: CHAncery 5171-2

For use in your own Service Department. Order nominal 1-lb. reels of Ersin Multicore Solder.

Net trade prices:

13 S.W.G. - - 3/3
16 S.W.G. - - 3/6